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# **A study of apparel consumer behaviour in China and Taiwan**

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## **Abstract**

To understand consumer behaviour and preferences for apparel shopping in Asia, the current study was undertaken to investigate the following three topics in China and Taiwan: online and offline shopping behaviours, product evaluative criteria and fashion information sources. Data was collected through questionnaire surveys carried out in mainland China and Taiwan. According to the results of this study, both Chinese and Taiwanese women shopped more frequently than men. Chinese consumers shopped more frequently online than did their Taiwanese counterparts. Both Chinese and Taiwanese consumers cited “fit” and “comfort” as the two most important evaluative criteria for clothing, while “brand name” and “country of origin” were the least important cues. Both Chinese and Taiwanese participants cited “friends” to be their most important fashion information sources, with “siblings” and “parents” being the two least important sources.

**Keywords:** consumer behaviour, apparel attributes, product choice, fashion innovativeness, cross-national study

## **1. Introduction**

According to the forecast of Economist Intelligence Unit (2014), the Taiwanese consuming power is expected to grow from US\$324.1 billion in 2013 to US\$370.0 billion in 2018. According to the Ministry of Economic Affairs, the retail sales in Taiwan increased 0.42 percent year-on-year in October of 2016, and average 3.06 percent from 2010 to 2016. The economic growth in Taiwan is partly due to the increase of tourists from mainland China since the signing of *Economic Cooperation Framework Agreement* (ECFA) in 2010. In addition to the retail sales, e-commerce in Taiwan has experiencing tremendous growth due to the high internet penetration and widespread of smartphone usage.

In China, the GDP growth rate was 6.9 percent in 2015 (National Bureau of Statistics of China, 2016). The total retail sales of consumer goods increased from RMB10.8 or US\$1.56 trillion in 2008 to RMB20.7 or US\$3.00 trillion in 2012. According to the report published by the China Internet Watch (2016), China is expected to surpass the U.S. to become the world's largest consumer market in 2016. Moreover, China is the largest e-commerce market with total sales of US\$899 billion in 2016, which is almost half of the total global e-commerce sales.

Due to the sound and steady economic growth in Taiwan and China (National Bureau of Statistics of China, 2016; Fung Business Intelligence Centre, 2014), it is imperative for both domestic and multinational retailers to understand their consumers in order to develop appropriate products and effective strategies to meet their needs and aspirations. Although the Gross Domestic Product (GDP) per capita of Taiwan (US\$46,783.00) was substantially higher than mainland China (US\$14,107.43) in 2015 (International Monetary Fund, 2016),

China has undergone significant economic transformation (Lu 2004, Rahman *et al.* 2010) due to the globalization and the advancement of communication technology. It is reasonable to believe that the changing socio-economic landscape in China could play an influential role in narrowing the inequality gap between China and Taiwan. However, there are relatively few empirical studies (e.g., Goldsmith *et al.* 1993, Kim *et al.* 2002, Rahman *et al.* 2010) that have examined this research topic, particularly from the “Greater China” perspective. Our research seeks to enrich our understanding of consumer preferences and behaviours in two different socio-economic contexts, and the reasons why China and Taiwan were selected was because there are significant differences in their social, political and economic conditions (Rahman *et al.* 2010, Hofstede 1984) while also sharing many similarities.

The remaining portion of this paper is organized as follows. We review previous literature related to consumer shopping behaviour and demographics (gender and age), the significance of fashion information sources and the role of product evaluative cues. Our proposed research questions are also included. Research methodology, and discussions of the results are presented in the following two sections respectively. This is followed by the conclusion and implications, and in the final section, limitations and further research are reported and suggested.

## **2. Literature review and research questions**

### **2.1 Demographics**

Many consumer behaviour studies (Bakewell and Mitchell 2006, Bakewell *et al.* 2006, Lee *et al.* 2005, Noble *et al.* 2006, Wilhelm and Mottner 2005) have investigated the impact of demographic variables such as gender, age, education, income level and family size. In particular, gender and age have been identified as important factors in many consumer research studies (Campbell 1997, Chen-Yu and Seock 2002, Seock and Bailey 2008). For example, Bohdanowicz and Clamp (1994) pointed out that gender is a significant factor affecting an individual's choice of clothing, and Behling (1985-1986) suggested that age plays a critical role in the fashion adoption process. Therefore, the present study was primarily focused on these two demographic variables: gender and age.

#### **2.1.1 Gender and apparel shopping behaviours – frequency and time spent**

According to a study conducted by McCracken and Roth (1989), women were significantly more astute than men in decoding and interpreting the syntax of clothing. Many studies (Chen-Yu and Seock 2002) have revealed that female consumers shopped significantly more often, and spent more money, on clothing than males. Hart *et al.* (2007) found that many female shoppers visited more stores during a single shopping excursion than men. Many women enjoyed shopping because they viewed it as a leisure activity and a means for self-gratification. However, according to more recent research studies (Ross 2011, Seo 2009, Sindicich and Black 2011), men are becoming increasingly more involved with fashion. Today's male consumers are more fashion conscious and concerned with their appearance than in previous generations. A study on fashion consciousness (Parker *et al.* 2004) found that while female American and Japanese teenagers tended to be more fashion conscious than males, this gender effect did not apply to the Chinese sample. According to our literature review, the results of gender effects are inconclusive among studies and across nations. Due to insufficient literature and inconclusive findings, research questions were put forth instead of hypotheses for the current study. The following research questions were posed to further investigate the gender effects on apparel shopping behaviours:

RQ1a: What effects does gender have on the frequency and time spent on apparel shopping at the brick-and-mortar stores in China?

RQ1b: What effects does gender have on the frequency and time spent on apparel shopping at the brick-and-mortar stores in Taiwan?

### *2.1.2 Gender and online apparel shopping behaviours*

In terms of online shopping behaviours, a number of studies (Kim and Kim 2004, Van den Poel and Buckinx 2005, Wells and Chen 1999) have shown that gender was an important demographic variable. Men are more interested in learning and navigating computer technologies and have become more involved in downloading and making online purchases than women (Dholakia and Chiang 2003, Van Slyke *et al.* 2002, Teo 2001). Several studies (e.g., Allen 2001, Kwak *et al.* 2002) have also found that men are more likely to spend more money and make a higher number of online purchases than women. A study of gender and e-commerce (Rodgers and Harris 2003) revealed that men perceived online shopping as an extremely convenient shopping mode than women, and had greater trust for this process.

However, other studies found that gender has no effect on online shopping behaviour (Hernández-Ortega *et al.* 2011, Khare 2016). In addition, another study of gender differences on information searches and purchase behaviours indicated that female college students had more online apparel shopping experience than men (Seock and Bailey 2008). This could be partly due to the fact that female consumers have a greater clothes consciousness and interest in fashion than their male counterparts (Beaudoin *et al.* 2003, Pentecost and Andrews 2010).

RQ2a: What effects does gender have on the frequency and time spent with online shopping in China?

RQ2b: What effects does gender have on the frequency and time spent with online shopping in Taiwan?

In order to gain an understanding of the effects of gender from a cross-national/regional perspective, we posed the following question:

RQ3: What are the differences regarding the effects of gender on the frequency of online and offline apparel shopping and time spent between China and Taiwan?

### *2.1.3 Age and apparel shopping behaviours – frequency and time spent*

Consumers in their 20s to 40s seem to be the most economically active, and they are more likely to be involved with, and to spend more money on, new clothes than other age groups (Workman and Studak 2006). Debnam and Svinos (2007) found that Chinese consumers in their teens and 20s were further inclined to spend than to save as compared to their older demographic cohorts. Indeed, younger Chinese women are relatively highly sophisticated and fashion conscious, and many are willing to pay a higher price for imported goods and foreign brands (Lee *et al.* 2004). Another study (Birtwistle and Moore 2006) conducted in the UK also found that consumers between 16 and 24 years of age purchased new clothes more frequently than other age groups, and this study also reported that the purchase rate would decline as consumers aged. With this discussion, it is reasonable to suggest that age is associated with a consumer's shopping behaviour. Therefore, the following research questions regarding the effects of age were posed for this study:

RQ4a: What effects does age have on the frequency and time spent on apparel shopping at the brick-and-mortar stores in China?

RQ4b: What effects does age have on the frequency and time spent on apparel shopping at the brick-and-mortar stores in Taiwan?

#### *2.1.4 Age and online apparel shopping behaviours*

In terms of online shopping, several studies (Allred *et al.* 2006, Mafé and Blas 2006) indicate that age was a significant variable. Sorce *et al.* (2005) also reported that younger consumers searched for more products online than their older counterparts. According to other studies, (McFarland 2001, Yang and Folly 2008) age is a critical factor affecting consumer technology adoption, usage and acceptance. However, some recent studies (Hernández-Ortega *et al.* 2011, Khare 2016) report that demographic factors such as age had no effect on online shopping behaviours. As Khare (2016) suggests that online shopping behaviour was influenced by the frequency of Internet usage rather than age. The findings from previous research are inconsistent and inconclusive; therefore, we raised the following questions for further investigation:

RQ5a: What effects does age have on the frequency of online apparel shopping and time spent in China?

RQ5b: What effects does age have on the frequency of online apparel shopping and time spent in Taiwan?

RQ6: What are the differences regarding the effects of age on the frequency of online and offline apparel shopping and time spent between Chinese and Taiwanese consumers?

#### *2.2 Fashion information-seeking behaviours*

Individuals often search for information from both internal and external sources. Internal information sources about a product include the consumer's memory, knowledge and past experience. External information sources have been classified as personal/non-marketer dominated sources (e.g., friends, parents) and impersonal/marketer-dominated sources (e.g., printed media, television commercials, etc.) (Barber *et al.* 2009, Seock and Bailey 2009). In many shopping situations, consumers tended to rely more heavily on external information sources: (1) when they evaluate a new or unfamiliar product; (2) if they don't have adequate knowledge about the product; or (3) some people do not have enough confidence nor ability to evaluate similar alternatives. In this context, the current study primarily focused on external information sources.

Several prior studies (e.g., Lee 2014) show that both experts and novices engage in information-seeking behaviours. Experts or experienced shoppers often acquire product-related information to update and bolster their knowledge as well as to reduce their dependence on others (Bettman and Park 1980). Pre-purchase information-search activities may help consumers to identify a desirable product, enhance their buying decision, and/or reduce uncertainty. However, due to the overwhelming amount of available information, consumers are unlikely to conduct a fully comprehensive search or gather product information from every available source. Thus, it is not difficult to understand why consumers often use convenient or their preferred sources for seeking information. In order to discover which information source is most important or more frequently used by consumers in China and Taiwan, the following research questions were posed:

RQ7a: What fashion information sources play a more significant role in China?

RQ7b: What fashion information sources play a more significant role in Taiwan?

RQ7c: What are the differences regarding the significant role of fashion information sources between Chinese and Taiwanese consumers?

### **2.3 Product evaluative cues**

Consumers may hold different preferences for certain types of products in their memory. In order to design and develop products to satisfy diverse consumer groups, a company should acquire knowledge about their consumers' needs and preferences with respect to what the product offers. According to some studies (Beaudoin and Lachance 2006, Li and Xiao 1999, Zhang *et al.* 2002) conducted in China, older consumers are more pragmatic and price conscious, whereas younger consumers are more concerned with clothing styles and brand names. The salient impact of product cues may vary among consumers depending on their personal needs, and socio-economic contexts. Prior research studies (e.g., Rahman 2011) have dichotomized the product cues into two types – intrinsic and extrinsic. Intrinsic cues refer to those attributes directly attached to the physical product such as colour, style, fabric and fit, while extrinsic cues ascribe to those intangible attributes which are indirectly attached to the product such as price, brand name and country of origin. In order to gain an understanding of consumer choice and preference from a cross-cultural perspective, eleven product cues were selected for the present study. The selection criteria for these product cues were based on the guidelines of numerous apparel studies (e.g., Rahman 2011, Rahman *et al.* 2009) such as the relevancy, importance and frequency. In order to understand the effects of product cues, the following research question is posed:

RQ8a: What product cues play a more significant role in apparel evaluation in China?

RQ8b: What product cues play a more significant role in apparel evaluation in Taiwan?

RQ8c: What are the differences regarding the significance of apparel evaluative cues between Chinese and Taiwanese consumers?

## **3. Research methodology**

### **3.1 Questionnaire survey**

A questionnaire survey consisting of three sections was developed and used for the present study. The first section of questions covered two areas: (1) the importance of product evaluative cues; and (2) fashion information sources. In total, twelve apparel product cues and eleven fashion information sources were selected to investigate the significance of product-evaluative cues and information source(s) for clothing consumption. A five-point Likert-type response scale (5 = strongly agree or very important to 1 = strongly disagree or unimportant) was used for this section. The inclusion and exclusion of product cues and fashion information source on the list were based on several prior fashion research studies (Eckman *et al.*, 1990; Rahman *et al.*, 2010, Rahman 2011), and also determined by four judges (two fashion practitioners and two fashion professors) to ensure cross-national appropriateness and relevancy. This validation process among the judges was important to improve the effectiveness of the instrument. The second section focused on consumer shopping behaviours such as apparel spending, shopping channels (online versus offline) and shopping frequencies. The third section was designed to collect demographic data including age, gender, income level, occupation and marital status. The questionnaire was developed in a simplified Chinese version for China and a traditional Chinese version for Taiwan. Prior to the data collection, the questionnaire was pre-tested on fifteen participants in each country to identify potential problems, misunderstandings and ambiguities, and corresponding revisions and amendments were made (Rahman *et al.*, 2010).

### **3.2 Data collection**

In order to collect data and increase the response rate from different age groups (18-25 and 26-33 years), a commercial online *SurveyMonkey* software program was used in both countries,

and data were collected from both genders in these two age groups. Kang and Park-Poaps (2010) suggest that there are several advantages for employing online surveys, as they (1) reduce coding time; (2) lower financial costs; (3) minimize coding errors; (4) foster greater privacy; and (5) allow convenience for participants. The data of this survey was primarily collected from convenience sampling through the assistance of acquaintances and friends in China and Taiwan. Some responses were removed from the data sets due to irrelevant age (over 33 years old) and excessive missing data. In total, we received 338 usable questionnaires from China and 151 from Taiwan for analysis. The result of unequal sample size could be partly due to the population size of both countries.

#### 4. Results

The Chinese sample was composed of 213 females (63.0%) and 125 males (37.0%), and the Taiwanese sample was composed of 88 females (58.3%) and 63 males (41.7%). The difference in gender distribution was obvious in both samples, although there were a slightly higher proportion of men in the Taiwanese sample than the Chinese sample. Clearly, the participants were predominately female. This may be attributed to the nature of the topic of study. As Quigley and Notarantonio (2009) point out that women are more engaged and interested in fashion than are their male counterparts. Moreover, the subjects from these two countries were relatively young, with most of the participants falling between 18 and 25 years of age. The mean age was 24.9 years and 24.7 years for the Chinese and Taiwanese respectively, and many were students, as shown in Table 1.

|                          | China                |         | Taiwan               |         |
|--------------------------|----------------------|---------|----------------------|---------|
|                          | Frequency<br>(N=338) | Percent | Frequency<br>(N=151) | Percent |
| <i>Gender</i>            |                      |         |                      |         |
| Male                     | 125                  | 37.0    | 63                   | 41.7    |
| Female                   | 213                  | 63.0    | 88                   | 58.3    |
| No Response              | 0                    | 0.0     | 0                    | 0.0     |
| <i>Age</i>               |                      |         |                      |         |
| 18-25                    | 214                  | 63.3    | 100                  | 66.2    |
| 26-33                    | 124                  | 36.7    | 47                   | 31.1    |
| No Response              | 0                    | 0.0     | 4                    | 2.6     |
| Mean Age                 | 24.9 (n=338)         |         | 24.7 (n=147)         |         |
| <i>Employment status</i> |                      |         |                      |         |
| Full-time Employed       | 116                  | 34.2    | 58                   | 38.4    |
| Part-time Employed       | 6                    | 1.8     | 3                    | 2.0     |
| Student                  | 178                  | 52.7    | 72                   | 47.7    |
| Other                    | 38                   | 11.3    | 18                   | 11.9    |
| No Response              | 0                    | 0.0     | 0                    | 0.0     |

Table 1. Demographic profile

##### 4.1 Gender

##### 4.1.1 China: gender effects in the frequency and time spent on apparel shopping (RQ1a & RQ2a)

According to our findings, female consumers shopped more frequently and spent more time at the brick-and-mortar stores than male consumers. For example, 25.8% of female consumers

(n=55) shopped for apparel over 15 times per year, as compared to only 4.8% of male consumers (n=6). In addition, the vast majority of female consumers (n=110, 59.1%) shopped at the mall for over 2 hours each time, while the majority of male consumers (n=93, 74.4%) only spent 2 hours or less. These findings are consistent with previous studies (Hart *et al.* 2007, Ross, 2011, Sindicich and Black 2011). Moreover, the results of the *t*-test revealed that there was a significant difference in apparel shopping at the physical stores between male and female consumers ( $t=-7.473$ ,  $df=336$ ,  $p=0.000$ ), and there was also a significant variance on time spent at the shopping mall between genders ( $t=-6.537$ ,  $df=333$ ,  $p=0.000$ ), as shown in Table 2.

In terms of online apparel shopping, women shopped more frequently than men – e.g., 29.1% (n=62) of women shopped more than 15 times per year as compared to 8% (n=10) for men. Our *t*-test result also shows the significant difference in the frequency of online apparel shopping between men and women ( $t=5.594$ ,  $df=334$ ,  $p=0.000$ ). It is evident that Chinese women are more involved in apparel shopping than men.

#### 4.1.2 Taiwan: gender effects in the frequency and time spent on apparel shopping (RQ1b & RQ2b)

In Taiwan, our findings also indicate that female consumers shopped relatively more frequently than male consumers at the physical stores per year. In regards to online shopping, 54.7% female shopped more than 3 times per year, as compared to 38.1% of male consumers. According to the *t*-test analysis, there was significant difference in the frequency of both online and offline (physical stores/shopping mall) shopping between males and females. However, our *t*-test results do not show significant differences on the average time spent at the brick-and-mortar stores, as well as online, between men and women (see Table 2 for all details). It is logical to suggest that Taiwanese women are generally more involved in apparel shopping than men, but they don't necessarily spend more time in either offline or online activities when they do shop.

| Gender                                                           | Male |       |     | Female |       |     | 95% CI for<br>mean difference | <i>t</i> | df  |
|------------------------------------------------------------------|------|-------|-----|--------|-------|-----|-------------------------------|----------|-----|
|                                                                  | M    | SD    | n   | M      | SD    | n   |                               |          |     |
| <i>Frequency of apparel shopping at physical stores per year</i> |      |       |     |        |       |     |                               |          |     |
| China                                                            | 2.33 | 1.349 | 125 | 3.66   | 1.699 | 213 | -1.679, -0.979                | -7.473*  | 336 |
| Taiwan                                                           | 2.35 | 1.334 | 63  | 3.23   | 1.740 | 88  | -1.395, -0.362                | -3.359*  | 149 |
| <i>Frequency of online apparel shopping each year</i>            |      |       |     |        |       |     |                               |          |     |
| China                                                            | 3.16 | 1.578 | 125 | 4.35   | 2.035 | 211 | -1.603, -0.769                | -5.594*  | 334 |
| Taiwan                                                           | 2.43 | 1.304 | 63  | 3.20   | 1.814 | 88  | -1.305, -0.247                | -2.900*  | 149 |
| <i>Average time spent at the shopping mall each visit</i>        |      |       |     |        |       |     |                               |          |     |
| China                                                            | 2.11 | 0.930 | 124 | 2.75   | 0.816 | 211 | -0.827, -0.445                | -6.537*  | 333 |
| Taiwan                                                           | 2.19 | 0.859 | 63  | 2.22   | 0.890 | 88  | -0.311, 0.261                 | -0.176   | 149 |
| <i>Average time spent in online shopping each session</i>        |      |       |     |        |       |     |                               |          |     |
| China                                                            | 1.56 | 0.846 | 125 | 2.18   | 0.846 | 212 | -0.813, -0.425                | -6.282*  | 335 |
| Taiwan                                                           | 1.71 | 0.831 | 63  | 1.93   | 0.968 | 88  | -0.516, -0.081                | -1.442   | 149 |

\*  $p < 0.05$

Table 2. Effects of gender: *t*-test results of the frequency of apparel shopping and time spent by country

#### 4.1.3 Differences in the effects of gender of the frequency and time spent on apparel shopping between China and Taiwan (RQ3)



According to the *t*-test analysis of male consumers, there were no significant differences in the frequency of apparel shopping at the brick-and-mortar stores; nor the time spent at the shopping mall and with online shopping between China and Taiwan. The exception was seen in the frequency of online shopping where Chinese male consumers tended to shop online more often than their Taiwanese counterparts. With these findings, it is reasonable to suggest that the shopping behaviours of both Chinese and Taiwanese male consumers are fairly similar.

Regarding the apparel shopping behaviours between Chinese and Taiwanese female consumers, the *t*-test results show significant differences in the frequency of shopping and time spent, as displayed in Table 3. Based on our findings, Chinese female consumers are more involved in apparel shopping than those in Taiwan.

| Country                                                          | China |       |     | Taiwan |       |     | 95% CI for<br>mean difference | t      | df  |
|------------------------------------------------------------------|-------|-------|-----|--------|-------|-----|-------------------------------|--------|-----|
|                                                                  | M     | SD    | n   | M      | SD    | n   |                               |        |     |
| <i>Frequency of apparel shopping at physical stores per year</i> |       |       |     |        |       |     |                               |        |     |
| 18-25 years                                                      | 3.53  | 1.773 | 214 | 3.05   | 1.749 | 100 | 0.057, 0.899                  | 2.236* | 312 |
| 26-33 years                                                      | 2.54  | 1.370 | 124 | 2.55   | 1.348 | 47  | 0.602, 0.430                  | -0.330 | 169 |
| Male                                                             | 3.13  | 1.586 | 125 | 3.17   | 1.465 | 63  | -0.518, 0.425                 | -0.195 | 186 |
| Female                                                           | 4.63  | 1.762 | 212 | 4.11   | 1.908 | 88  | 0.068, 0.969                  | 2.264* | 298 |
| <i>Frequency of online apparel shopping each year</i>            |       |       |     |        |       |     |                               |        |     |
| 18-25 years                                                      | 3.74  | 1.920 | 214 | 2.99   | 1.667 | 100 | 0.314, 1.192                  | 3.373* | 312 |
| 26-33 years                                                      | 4.19  | 2.010 | 122 | 2.79   | 1.654 | 47  | 0.896, 2.419                  | 4.298* | 167 |
| Male                                                             | 3.82  | 1.898 | 125 | 2.92   | 1.688 | 63  | 0.337, 1.453                  | 3.165* | 186 |
| Female                                                           | 5.15  | 2.282 | 210 | 3.84   | 2.176 | 88  | 0.744, 1.869                  | 4.571* | 298 |
| <i>Average time spent at the shopping mall each visit</i>        |       |       |     |        |       |     |                               |        |     |
| 18-25 years                                                      | 2.61  | 0.878 | 212 | 2.13   | 0.774 | 100 | 0.277, 0.285                  | 4.663* | 310 |
| 26-33 years                                                      | 2.35  | 0.949 | 123 | 2.40   | 1.056 | 47  | -0.386, 0.277                 | -0.325 | 168 |
| Male                                                             | 2.11  | 0.930 | 124 | 2.19   | 0.859 | 63  | -0.354, 0.199                 | -0.553 | 185 |
| Female                                                           | 2.75  | 0.816 | 210 | 2.22   | 0.890 | 88  | 0.327, 0.746                  | 5.039* | 296 |
| <i>Average time spent in online shopping each session</i>        |       |       |     |        |       |     |                               |        |     |
| 18-25 years                                                      | 1.96  | 0.860 | 213 | 1.83   | 0.853 | 100 | 0.077, 0.332                  | 1.229  | 311 |
| 26-33 years                                                      | 1.94  | 1.026 | 124 | 1.91   | 1.060 | 47  | -0.329, 0.371                 | 0.116  | 169 |
| Male                                                             | 1.56  | 0.846 | 125 | 1.71   | 0.831 | 63  | -0.411, 0.102                 | -1.187 | 186 |
| Female                                                           | 2.19  | 0.926 | 212 | 1.93   | 0.968 | 88  | 0.027, 0.496                  | 2.197* | 298 |

\*  $p < 0.05$

Table 3. Results of the *t*-test analysis: Effects of gender and age on apparel shopping between China and Taiwan

## 4.2 Age

### 4.2.1 China: effects of age in the frequency of online and offline apparel shopping (RQ4a & RQ5a)

In terms of consumers' shopping behaviours, our results indicated that 25.7% of younger Chinese consumers (18-25 years old) shopped for clothing over 15 times per year at the physical stores - this is five times higher than the older age group (4.8%). According to the *t*-test results, there was a significant difference in the frequency of apparel shopping and time spent at the physical stores between younger and older consumers, as shown in Table 3. These findings indicated that younger consumers shopped for clothing more frequently and also spent more time at the brick-and-mortar stores than the older consumers. In terms of our participants' online shopping behaviours, 25.8% of the older consumers shopped for clothing over 15 times per year, as compared to 18.7% of the younger group. In total, only 3.7% of the younger

consumers and 2.4% of the older consumers had never shopped online. Thus, it is reasonable to suggest that online shopping is one of the popular shopping modes in China. In addition, the *t*-test results indicated that there was a significant difference in the frequency of online apparel shopping per year ( $t=-2.011$ ,  $df=334$ ,  $p=0.000$ ), but no significant difference in the average time spent between younger and older consumers when shopping online ( $t=0.213$ ,  $df=335$ ,  $p=0.831$ ).

#### 4.2.2 Taiwan: effects of age in the frequency of online and offline apparel shopping (RQ4b and RQ5b)

According to the *t*-test results, there were no significant differences between younger and older consumer groups in terms of the frequency of apparel shopping and time spent at the physical stores as well as online (see Table 4).

| Age Group                                                        | Age: 18-25 Years |       |     | Age: 26-33 Years |       |     | 95% CI for<br>mean difference | <i>t</i> | df  |
|------------------------------------------------------------------|------------------|-------|-----|------------------|-------|-----|-------------------------------|----------|-----|
|                                                                  | M                | SD    | n   | M                | SD    | n   |                               |          |     |
| <i>Frequency of apparel shopping at physical stores per year</i> |                  |       |     |                  |       |     |                               |          |     |
| China                                                            | 3.53             | 1.773 | 214 | 2.54             | 1.370 | 124 | 0.624, 1.351                  | 5.347*   | 336 |
| Taiwan                                                           | 3.05             | 1.749 | 100 | 2.55             | 1.348 | 47  | -0.025, 1.018                 | 1.721    | 145 |
| <i>Frequency of online apparel shopping each year</i>            |                  |       |     |                  |       |     |                               |          |     |
| China                                                            | 3.74             | 1.920 | 214 | 4.19             | 2.010 | 122 | -0.881, -0.887                | -2.011*  | 334 |
| Taiwan                                                           | 2.99             | 1.667 | 100 | 2.79             | 1.654 | 47  | -0.380, 0.785                 | 0.690    | 145 |
| <i>Average time spent at the shopping mall each visit</i>        |                  |       |     |                  |       |     |                               |          |     |
| China                                                            | 2.61             | 0.878 | 212 | 2.35             | 0.949 | 123 | 0.057, 0.461                  | 2.525*   | 333 |
| Taiwan                                                           | 2.13             | 0.774 | 100 | 2.40             | 1.056 | 47  | -0.618, 0.070                 | -1.775   | 145 |
| <i>Average time spent in online shopping each session</i>        |                  |       |     |                  |       |     |                               |          |     |
| China                                                            | 1.96             | 0.860 | 213 | 1.94             | 1.026 | 124 | -0.183, 0.228                 | 0.213    | 335 |
| Taiwan                                                           | 1.83             | 0.853 | 100 | 1.91             | 1.060 | 47  | -0.437, -0.267                | -0.520   | 145 |

\*  $p < 0.05$

Table 4. Results of the *t*-test analysis: Effects of age on the frequency of apparel shopping and time spent by country

#### 4.2.3 Differences in the effects of age in the frequency of online apparel shopping between China and Taiwan (RQ6)

According to the *t*-test analysis, there were significant differences in the frequency of apparel shopping per year at the physical stores between Chinese and Taiwanese younger consumer groups, but no significant difference between the older consumer groups. This finding indicated that younger Chinese consumers tended to shop more frequently at the physical stores than their Taiwanese counterparts. In terms of the frequency of online shopping for apparel per year, our *t*-test results (as shown in Table 4) show significant differences between Chinese and Taiwanese consumers of both age groups. In addition, the *t*-test results show significant differences on average time spent at the shopping mall between the younger Chinese and Taiwanese consumers, but no significant difference were found between the older age groups. Interestingly enough, there is no significant difference on average time spent in online shopping between Chinese and Taiwanese consumers of both age groups. Although Chinese consumers shopped online more frequently than the Taiwanese of both age groups, the average time spent online was similar.

### 4.3 Sources of fashion information

#### 4.3.1 China and Taiwan: the significance of fashion information sources (RQ7a, 7b and 7c)

“Friends”, “store/window displays,” and the “Internet” (e-retailer websites) were ranked as the top three sources by the Chinese consumers according to the value of mean. In terms of impersonal source of information, a study conducted by Seock and Bailey (2009) also found that many consumers were relied on the in-store displays. While Taiwanese consumers considered “friends” as the most important fashion information source, “people on the street,” and magazines” followed as their second and third choices. Both Chinese and Taiwanese consumers ranked other personal sources such as “parents” and “siblings” to be their least important sources, as shown in Table 5. According to our *t*-test analysis, there were significant differences in the choice of “friends,” “people on the street,” “celebrities,” and “television” between the Chinese and Taiwanese consumers, the latter relying more heavily on these sources to search for fashion information than their Chinese counterparts.

| Country                       | China |       |     | Taiwan |       |     | 95% CI for mean difference | <i>t</i> | df  |
|-------------------------------|-------|-------|-----|--------|-------|-----|----------------------------|----------|-----|
|                               | M     | SD    | n   | M      | SD    | n   |                            |          |     |
| Friends                       | 3.98  | 1.031 | 337 | 4.25   | 0.824 | 151 | -0.453, -0.079             | -2.794*  | 486 |
| Store/window displays         | 3.88  | 0.995 | 337 | 3.77   | 0.976 | 151 | -0.074, 0.306              | 1.198    | 486 |
| Internet: e-retailer websites | 3.74  | 1.026 | 337 | 3.64   | 1.106 | 151 | -0.099, 0.300              | 0.986    | 486 |
| People on the street          | 3.72  | 1.014 | 337 | 3.93   | 0.943 | 151 | -0.401, -0.019             | -2.158*  | 486 |
| Advertisements/billboards     | 3.70  | 1.021 | 337 | 3.69   | 0.960 | 151 | -0.178, 0.207              | 0.148    | 486 |
| Magazines                     | 3.68  | 1.037 | 337 | 3.87   | 1.011 | 151 | -0.383, 0.013              | -1.837   | 486 |
| Internet: fashion blogs       | 3.51  | 1.168 | 337 | 3.55   | 1.106 | 151 | -0.260, 0.182              | -0.349   | 486 |
| Celebrities                   | 3.40  | 1.174 | 337 | 3.67   | 1.094 | 151 | -0.492, -0.050             | -2.410*  | 486 |
| Television                    | 3.23  | 1.141 | 337 | 3.67   | 1.075 | 151 | -0.656, -0.225             | -4.011*  | 486 |
| Siblings                      | 3.11  | 1.291 | 337 | 3.28   | 1.239 | 151 | -0.411, 0.080              | -1.325   | 486 |
| Parents                       | 2.97  | 1.178 | 337 | 2.87   | 1.237 | 151 | -0.130, 0.330              | 0.852    | 486 |

\*  $p < 0.05$

Table 5. The significance and effects of fashion information sources

### 4.4 Apparel evaluative cues

#### 4.4.1 China and Taiwan: the significance of product evaluative cues (RQ8a, 8b and 8c)

As shown in Table 6, it is evident that “fit” and “comfort” were perceived to be the two most important product cues for clothing evaluation by participants of both countries. “Quality/workmanship” was ranked as the third most important factor by Chinese consumers, followed by “colour” and “style,” whereas the Taiwanese consumers ranked “price” as the third most important cue, followed by “style” and “colour.” It is interesting to note that the Chinese and Taiwanese both perceived “ease of care,” “brand name,” and “country of origin” as the three least important evaluative cues. According to the *t*-test results, there were significant differences in the “quality/workmanship” and “country of origin” cues. Our results showed that the functional variables (e.g. fit, comfort, durability) and symbolic/aesthetic variables (e.g. style, colour and brand name) played a similar role in clothing evaluation regardless of socio-economic differences between China and Taiwan.

| Country             | China |       |     | Taiwan |       |     | 95% CI for mean difference | <i>t</i> | df  |
|---------------------|-------|-------|-----|--------|-------|-----|----------------------------|----------|-----|
|                     | M     | SD    | n   | M      | SD    | n   |                            |          |     |
| Fit                 | 4.61  | 0.764 | 337 | 4.58   | 0.707 | 151 | -0.110, 0.177              | 0.456    | 487 |
| Comfort             | 4.52  | 0.728 | 337 | 4.44   | 0.660 | 151 | -0.062, 0.210              | 1.069    | 487 |
| Quality/workmanship | 4.51  | 0.681 | 337 | 4.11   | 0.801 | 151 | 0.267, 0.544               | 5.756*   | 487 |
| Colour              | 4.38  | 0.847 | 337 | 4.26   | 0.892 | 151 | -0.049, 0.282              | 1.385    | 487 |
| Style               | 4.29  | 0.865 | 337 | 4.33   | 0.806 | 151 | -0.201, 0.125              | -0.461   | 487 |

|                       |      |       |     |      |       |     |                |         |     |
|-----------------------|------|-------|-----|------|-------|-----|----------------|---------|-----|
| Price                 | 4.27 | 0.820 | 337 | 4.40 | 0.704 | 151 | -0.286, 0.016  | -1.751  | 487 |
| Fabric                | 4.22 | 0.850 | 337 | 4.23 | 0.826 | 151 | -0.171, 0.153  | -0.111  | 487 |
| Durability            | 4.01 | 0.900 | 337 | 4.12 | 0.923 | 151 | -0.279, 0.070  | -1.176  | 487 |
| Wardrobe coordination | 3.99 | 1.080 | 337 | 4.09 | 0.970 | 151 | -0.303, 0.101  | -0.982  | 487 |
| Ease of care          | 3.96 | 0.896 | 337 | 4.09 | 0.948 | 151 | 0.312, 0.038   | -1.536  | 487 |
| Brand name            | 3.43 | 1.107 | 337 | 3.26 | 1.186 | 151 | -0.047, 0.388  | 1.541   | 487 |
| Country of origin     | 2.51 | 1.197 | 337 | 3.02 | 1.010 | 151 | -0.734, -0.294 | -4.597* | 487 |

\*  $p < 0.05$

Table 6. The significance and different effects of apparel evaluative cues

## 5. Discussion of the findings

Although a significant body of research has previously examined consumers' shopping behaviours, literature that focuses specifically on Chinese and Taiwanese apparel consumers is still limited. The present study extends our understanding of consumer behaviour in two different markets sharing the same ethnic heritage and language.

The results of this study indicate that both Chinese and Taiwanese women shopped more frequently than men; and Chinese women aged 18-25 spent relatively more time in both online and offline shopping. However, in Taiwan, there were no significant differences in the effects of gender or age in terms of the frequency of apparel shopping and time spent in both online and offline shopping. There was a significant difference in the frequency of online shopping between the Chinese and Taiwanese market. Chinese consumers shopped more frequently online than their Taiwanese counterparts. It is evident that the Internet plays a much more important role in apparel shopping to the Chinese, and especially for the older age group. Although sources of information have been tested in previous apparel studies (e.g., Seock and Bailey, 2009), the effects of online e-retailer websites and fashion blogs have seldom been examined, particularly in a cross-cultural perspective. We believe that the findings from this study can provide meaningful insights to online practitioners and marketers.

Our results also indicate that young female Chinese consumers enjoyed shopping at the brick-and-mortar stores, and they spent relatively more time than the older consumers, and men. In China, shopping is an important social and leisure activity for this younger-aged group. This finding is consistent with a study of young consumers in China (Zhang 2005). Therefore, it is imperative for the mall/store managers to pay extra attention to the ambience and environmental quality of their retail establishments - for the intention to heighten the shopper experience and increase mall patronage. As Rahman *et al.* (2015) points out in their study, "to engage young consumers [in China] and enhance their patronage, 'shoppertainment' and technology-focused experiences (e.g., interactive displays, live performances, and themed events) may provide consumers novelty and excitement, ...." Today's shoppers do not merely focus on utilitarian values (instrumental, practical and task-related benefits) when they shop for clothing, but also seek for hedonistic, aesthetic, experiential and pleasure-related benefits.

According to the results, both Chinese and Taiwanese consumers cited "fit" and "comfort" as the two most important evaluative criteria for clothing selection, and these findings are in line with several previous apparel studies (Chae *et al.* 2006, May and Koester 1985, Wu and Delong 2006, Zhang *et al.* 2002). Consumers often look for a well-fitting and comfortable garment to satisfy their physical and psychological needs, as well as to justify their purchases. Following the "fit" and "comfort," cues, "colour" and "style" also played a relatively important role in product evaluation. Thus, it is reasonable to suggest that both Chinese and Taiwanese consumers are more concerned with the physical characteristics and aesthetic values (fit, style, colour) of clothing products than their functional benefits (durability, ease of care) and symbolic meaning (brand, country of origin). With this perspective, fashion practitioners

should prioritize their resources and pay additional attention to product research and development (e.g., creative design and fit engineering) to satisfy their consumers' physical and psychological needs. Due to similar responses from both samples, we believe that standardized or universal products can be designed and developed for the Chinese and Taiwanese markets.

Both Chinese and Taiwanese participants cited "friends" to be their most important fashion information source, while "siblings" and "parents" were the two least important sources. These findings are in line with consumer-socialization theory (Bearden and Randall 1990), for as children mature and enter adulthood, parental influence decreases while peer-group influence increases. A study of apparel shopping behaviours conducted by Koester and May (1985) also found that parental influence on clothing selection decreased as pre-adolescents aged, and peer and media influences increased. In addition, another study (Chen-Yu and Seock 2002) revealed that friends were the most important source of fashion information for apparel purchases by adolescents.

Other than "friends", the Internet also played a relatively more important role for the Chinese shoppers. However, many Taiwanese consumers were more reliant on what people wore on the street, or from magazines for fashion information than from online sources. This finding echoes the results on the frequency and time spent of apparel shopping behaviour – Chinese consumers were more involved in online shopping than their Taiwanese counterparts. These findings underscore at least two important implications for fashion practitioners. First, given that "friends" are cited by both Chinese and Taiwanese consumers as the most important fashion information source, it is reasonable to believe that fashion leaders could play an influential role through their personal network. Therefore, it is important for fashion practitioners to identify and communicate with fashion leaders because their word-of-mouth influences could greatly affect other people's perceptions toward a brand/product. Second, due to the salient impact of the Internet (particularly for Chinese shoppers), fashion e-retailers should constantly update and improve their website in order to maximize effective communications and build stronger connections with online shoppers. For example, garment style and comfort can be communicated through utilizing a variety of online videos, visual images and textual information. In addition to clothing style, many consumers are concerned about how clothing will look on their body, therefore, 3D model and product viewing in different angles (rotating, zooming and flipping) could play an important role in product evaluation and decision-making processes.

## **6. Conclusion**

E-commerce has rapidly transformed Chinese consumers' shopping behaviour and experiences. It is evidence that e-commerce plays a very important role in today's consumer market, particularly in China. For example, China's e-commerce giant Alibaba has broken its 'Singles Day' online sales record with \$17.8 billion just in one day (Weise, 2016). Due to the tremendous growth of online sales, Amazon's Prime has made their shipping program available to their consumers in China since October 28<sup>th</sup>, 2016 (Jing, 2016). With such perspective, it is reasonable to believe that Chinese consumers will continue to use online shopping agents to look for good deals, as well as desirable and exotic merchandises to fulfil their needs. Although e-commerce has been growing rapidly, the return of merchandises is inevitable. In order to reduce apparel returns, it is important for the fashion practitioners to provide well-fitted and comfortable clothing to their consumers in addition to affordable price and fashionable style.

In general, young Chinese consumers enjoy spending time in the brick-and-mortar stores for various reasons – personal shopping, hanging out with friends, and browsing the stores as leisure activity. However, older consumers may not want to spend a substantial amount of time

in the stores or shopping malls due to their busy lifestyle. It is reasonable to suggest that they are relatively more task-oriented when it comes to shopping, therefore, online shopping or convenience shopping deem to be an important factor to the older demographics in China. Therefore, product placement in relevant shopping channels is critical, and there is no “one-size-fit-all” strategies for different genders, age groups and cultures.

In order to be successful in today’s marketplace, fashion practitioners must pay attention to consumer specific needs; identify the significant role of different product attributes; monitor and identify the shifting paradigm of consumer taste and shopping habit; and discover what design features of a product may trigger particular cognitive and affective responses among Chinese consumers in different regions and countries.

## **7. Limitations and future research**

The present study has a number of limitations as many studies have. First, the sample size of Taiwan is relatively small. Second, the findings cannot be legitimately generalized to fit all Asian countries. More similar research will be required in other parts of the Asian region to increase validity and reliability. Third, the effects of fashion information sources and product evaluative cues could be varied among different product types. Therefore, it would be increasingly meaningful to conduct additional research using different consumer goods products. Fourth, the majority of the data was collected from a younger demographic; therefore, the results of this study lacked generalization to other market segments or cohorts from X-generation, baby boomer and senior demographic groups. Fifth, qualitative approaches such as interview and ethnographic research could be employed to offer in-depth information and insight to actual shopping experiences.

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